Altair 680b
Hobbyist's Delight

As computer hobbyists, your major consideration when buying new computer equipment is the comparison between features, performance and cost. Naturally, you choose components that offer the best combination of those criteria.

There's no compromise in quality when selecting the Altair 680b microcomputer. It's the perfect hobbyist computer—reliable, expandable, adaptable and inexpensive. Because the 680b may be incorporated in either minimum or maximum configurations, you pick the system to meet your level of expertise.

We help you out, of course, by including these standard features: 1K of low power static RAM, a 256-byte PROM monitor containing bootstrap loaders, and provisions for an additional 768 bytes of PROM/ROM. All this on one 8-1/2" x 10" PC board plus the Motorola 6800 microprocessor and built-in serial I/O interface.

When it comes to software, MITS provides you with the finest microcomputer languages on the market. Altair 680 BASIC is one of the most inclusive dialects of BASIC available with features and capabilities not usually found in a microcomputer-oriented language. Some of these are intrinsic functions (SIN, COS, TAN, LOG, EXP, SQR) for mathematical calculations, string manipulation (variables and constants can contain up to 255 alphanumeric characters) and data handling (Peek and Poke data byte transfer). The Altair Assembly Language Development System consists of an Assembler and Text Editor that are fully compatible with Motorola's format for assembly language programs, text and object files. Thorough text editing capabilities allow line insertion, printing, deletion and modification.

Altair 680 BASIC and Altair 680 Assembly Language Development System are included free with the purchase of an Altair 680b 16K static memory board.

Altair 680b peripherals make it possible to tailor the system for your own personal requirements. These memory and I/O expanders present many exciting options which greatly enhance the 680b's computing force.

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For inexpensive mass storage, interface an audio cassette recorder to your 680b with the KCACR (680b-KCACR). The KCACR design is based on the Kansas City Standard, which eliminates circuitry adjustments in order to operate precisely. Variations in tape speed (+20, −20% tolerance) and head alignment are allowable because of the bi-phase clocking action.

Let your 680b communicate to the diverse world of electrical, mechanical and sensory devices through the Process Control Interface (680b-PCI). Process monitoring and control, complete with handshake/interrupt capabilities, are under software control. Opto-isolator inputs, relay outputs and software are combined to receive and analyze process information—then transmit control signals.

Increase the I/O channels of your 680b with a Universal Input/Output board (680b-UIO). By implementing the optional serial port and two parallel ports, you can simultaneously interface up to three additional terminals. The serial port (ACIA) features switch selectable interface levels (RS-232, TTL or 20mA current loop) and baud rates (50 to 9600 bps).

Greater programming workspace for your 680b is obtainable by adding the 16K static memory module (680b-BSM). Power consumption is low (5 watts) and access time fast (215 nanoseconds). Board addressing is switch selectable—board IC circuitry is fully socketed.

The Analog to Digital/Digital to Analog Converter (680-AD/DA) permits acquisition and digitization of analog (real world) signals for use with your Altair 680b. AD/DA operation may be implemented in interrupt/sample interval generation, graphics production, scientific/electronic monitoring and experimentation.

The Altair 680b—a computer that can be adapted to your computing needs now, and in the future. In other words, a computer system that grows with you, and never stops.